IN THE SPECIFICATION

Please replace paragraph [17] with the following paragraph:

A vehicle includes a vehicle seat assembly, shown generally at 12 in Figure 1, and a restraint system including an airbag system 14. The seat assembly 12 is preferably a passenger seat and includes a seat back 16 and a seat bottom 18. A vehicle occupant 20 exerts a force F against the seat bottom 18. The vehicle occupant 20 can be an adult, child, or infant in a car seat.

Please replace paragraph [18] with the following paragraph:

The airbag system 14 deploys an airbag 24 under certain collision conditions. The deployment force for the airbag 24, shown as deployed in dashed lines in Figure 1, varies depending upon the type of occupant that is seated on the seat 12. For [and] an adult, the airbag 24 is deployed in a normal manner shown in Figure 1. If there is child or an infant in a car seat secured to the vehicle seat 12 then the airbag 24 should not be deployed, or should be deployed at a significantly lower deployment force. Thus, it is important to be able to classify seat occupants in order to control the various restraint systems.

Please replace paragraph [22] with the following paragraph:

Figure 3A depicts an alternate sensor mounting configuration. This embodiment has one less row, indicated at [30] 22, than the configuration shown in Figure 2. Reconfiguring the number of rows and/or columns is typically in response to customer requirements for a seat that includes an extra trench to define seat cushion sections. Or, for smaller seats, it may also be necessary to reduce the number of rows and columns.

Please replace paragraph [24] with the following paragraph:

As discussed above, the weight signals 28 from the physical sensors 26 are transmitted to a central control unit 30. As shown in Figure 4, the central control unit 30 is preferably a printed circuit board (PCB) 44 that includes a connector 46 with a plurality of ports for connection to the various sensors 26. The PCB 44 includes a central processor unit (CPU) 48 and electrically erasable programmable read-only memory (EEPROM) 50. EEPROM 50 is a type of programmable read-only memory that can be erased by exposing it to an electrical charge and retains its contents even when the power is turned off. The CPU 48 and EEPROM 50 receive the weight signals 28, generate the virtual matrix 40, and map the signals 28 into the matrix 40. The CPU 48 then generates an output signal 52 to the airbag [assembly] system 14 to control airbag deployment based on the seat occupant weight. The operation of PCBs and EEPROMs are well known and will not be discussed in further detail. Also, while PCBs and EEPROMs are preferred, other similar components known in the art can also be used.

Please replace paragraph [26] with the following paragraph:

Preferably, the virtual matrix 40 is configured to define an optimal pattern having an optimal number of virtual cells representing the optimal or maximum number of seat sensor positions. The virtual matrix 40 can be generated as a full matrix having a maximum number of seat sensor positions where each physical sensor 26 is mapped into a virtual cell, or the matrix 40 can be generated to represent the "missing" physical sensors 26 that the control unit 30 expects to receive signals from. In this second embodiment, shown in Figures 3A and 3B, the weight signals 28 from the physical sensors [28] 26 are combined with the data generated for the virtual row [30] 22 to determine the seat occupant weight.

Please replace paragraph [29] with the following paragraph:

Thus, any number of physical sensors 26 can be mounted within a seat in any type of pattern. The weight signals 28 generated by the sensors 26 are then mapped into the virtual matrix 40 and any remaining virtual cells 42 are assigned values based on information from surrounding sensors. Preferably, electrically erasable programmable read only memory EEPROM 50 is to map the virtual matrix 40 by determining values for each of the remaining number of virtual cells 42 with information from the surrounding cells. Optionally, position tables can be stored within the EEPROM 50 to be used in conjunction with occupant weight signals 28 from surrounding sensors 26 to determine values for each of the remaining number of virtual cells 42.